

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 25540

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In the Matter of )  
 )  
Closed Captioning )  
Requirements for )  
Digital Television )  
Receivers )

ET Docket No. 99-254

COMMENTS OF  
TELECOMMUNICATIONS FOR THE DEAF, INC.

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## **SUMMARY OF COMMENTS OF TELECOMMUNICATIONS FOR THE DEAF, INC.**

Telecommunications for the Deaf, Inc. ("TDI") is a national consumer organization that seeks to represent the interest of the twenty-eight million Americans who are deaf, hard of hearing, late deafened and deaf-blind. It submits comments in this proceeding to ensure that the Commission adopt rules for closed captioning on DTV that maximize the benefits that advances in technology can bring to the millions of Americans with communications disabilities who rely substantially on closed captioning of television programs for news, information and entertainment.

In particular, TDI urges the Commission to amend part 15 of its rules to reflect the entire standard, EIA-708-A, rather than just Section 9, as it proposes. Otherwise, viewers who depend on closed captioning will be not be able "to choose the font, size, color, location and placement of the captions" - features which Chairman Kennard frequently cites as benefits of DTV captioning that new technologies permit. It simply is not clear why the FCC does not insist that the manufacturers of digital televisions, stand-alone tuners and set-top boxes incorporate all of the decoding and display capabilities of the EIA standard.

Additionally, TDI encourages reexamination of the FTC 13 inch screen standard since these advancement in captioning technologies would make more captions more legible, rendering the 13 inch limit arbitrary. TDI asks that the Commission ensure that there be no "technology gap" during the transition from analog to digital technology, and that it require manufactures of all DTV-related components to comply with the TDCA. Finally, to minimize the number of DTVs on the market which can display the full range of digital caption content, TDI urges the Commission to expedite both the adoption and implementation of its proposed rules.

**COMMENTS OF**  
**TELECOMMUNICATIONS FOR THE DEAF, INC.**  
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In the Matter of	)	
	)	ET Docket No. 99-254
Closed Captioning Requirements	)	
for Digital Television Receivers	)	

**COMMENTS OF  
TELECOMMUNICATIONS FOR THE DEAF, INC.**

Telecommunications for the Deaf, Inc. ("TDI"), by undersigned counsel, respectfully submits these comments in response to the Federal Communications Commission's ("FCC's" or "Commission's") Notice of Proposed Rulemaking regarding the adoption of technical standards for the display of closed captions on digital television ("DTV") receivers.<sup>1</sup> TDI is a national consumer organization that seeks to represent the interests of the twenty-eight million Americans who are deaf, hard of hearing, late deafened and deaf-blind. TDI's mission is to promote equal access to telecommunications and media for people who are deaf, late deafened, hard of hearing or deaf-blind. It accomplishes the mission via the following activities: consumer education and involvement, technical assistance and consulting, application of existing and emerging technologies, networking and collaboration, uniformity of standards, and national policy development and advocacy.

By these comments, TDI seeks to ensure that the Commission adopt rules for closed captioning on DTV that maximize the benefits that advances in technology can bring to the

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<sup>1</sup> *Notice of Proposed Rulemaking*, ET Docket No. 99-254, released August 2, 1999 ("NPRM").

millions of Americans with communications disabilities who rely substantially on closed captioning of television programs for news, information and entertainment. Failure aggressively to pursue commensurate access to this critical information source could deprive these citizens of an opportunity to participate in one of society's most mainstream activities.

**I. The FCC Must Incorporate All of the EIA-708-A Standard Into Its Rules.**

In the *NPRM*, the Commission proposes to amend Part 15 of its rules to reflect standards for implementing closed captioning services adopted by the Electronics Industries Alliance ("EIA") in its standard, EIA-708-A.<sup>2</sup> The FCC proposes these new standards to be in compliance with the Television Decoder Circuitry Act ("TDCA") of 1990, which requires that closed captioning services be available to consumers as new technology is developed.<sup>3</sup> TDI continues to applaud the Commission for its efforts to date to increase the availability of closed captioned programming for analog/NTSC television. Although TDI commends the Commission for initiating this rulemaking to implement closed captioning requirements in the digital era, it believes that the FCC does not go far enough to ensure that Americans with hearing and visual disabilities will benefit adequately from new technological developments. TDI and the community it represents implore the Commission to display the leadership necessary to ensure that these promised benefits actually materialize.

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<sup>2</sup> It has come to TDI's attention that a revised standard has been drafted (*i.e.*, EIA-708-B), and that the revised standard may have been adopted by the EIA. To the extent there are significant differences between the versions, TDI intends to address EIA-708-B in its Reply Comments.

<sup>3</sup> *NPRM*, para. 3, citing *Report and Order* in General Docket 91-1, 6 FCC Rcd. 2419 (1991), 56 FR 27200 (1991).

The EIA digital standard incorporates substantial improvements over the corresponding analog standard, EIA-608. In particular, EIA-708-A provides users of closed captioning with the ability to use many additional fonts, characters and backgrounds, all of which improve the information-carrying capability and usefulness of the captions. Additionally, the digital standard allows consumers to increase or decrease the size of the caption displayed on the screen. This feature can be of significant importance to those television viewers, who in addition to being deaf, also have some degree of visual impairment. Adjusting the size of captions should be as convenient as adjusting the volume on a television, with the viewer's particular requirements, depending, for example, on the time of day or the distance the viewer is from the television set.<sup>4</sup> These enhancements are among those most frequently cited as benefits of DTV captioning that new technologies permit. On more than one occasion, FCC Chairman William F. Kennard has promoted the innumerable choices that digital technology will bring to television viewers that utilize closed captions.<sup>5</sup> TDI and the entire community of disabled Americans are relying on the FCC to adopt rules that go far enough to ensure that the vision of the digital environment becomes a reality.

The Commission, however, proposes to incorporate only Section 9 of EIA-708 into its rules, suggesting that this section alone would provide manufacturers with "sufficient guidance for successful implementation of closed captioning services with digital television receivers." (*NPRM*,

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<sup>4</sup> See *infra* note 9.

<sup>5</sup> In an address prepared for the Telecommunications for the Deaf, Inc. Convention, on July 15, 1999 ("Kennard TDI Speech"), the Chairman noted that "[w]ith digital television, viewers of closed captioning will be able to choose the font, size, color, location and placement of the captions." In remarks prepared to be delivered at an October 14, 1999, White House Media briefing celebrating Disability Awareness Month, Kennard reiterated that statement verbatim.

para. 4). TDI is concerned that incorporating only Section 9 of the standard into the Commission's rules could lead to the denial of the "wondrous benefits of telecommunications technologies"<sup>6</sup> to that significant portion of the population that relies on closed captioning services.

The Commission's proposal to adopt only Section 9 would establish minimum performance standards that do not provide adequate closed captioning capability in the digital environment, and in some instances, provide fewer features than are available today. As described in the *NPRM*, EIA-708-A provides comprehensive instructions for the encoding, delivery and display of closed caption information, including the ability for users to customize the caption display. Yet, for example, Section 9 requires manufacturers merely to provide support for a limited number of colors and fonts, a "least common denominator" approach which would not represent any significant improvement over the analog status quo. The FCC notes that adoption of Section 9 would allow caption decoders "to support display of only 8 or 22 foreground and background colors, *as opposed to the 64 colors possible with the full implementation of EIA-708-A.*" (*NPRM*, para. 8, emphasis added). Many of the capabilities that digital technology allows would be excluded from minimum design and manufacturing requirements if the FCC were to adopt only Section 9.

The abilities to change the size of a caption, to adjust the contrast of the captions, to customize the foreground and background colors of the captioning area are particularly crucial to users of captioning who possess different degrees of visual acuity.<sup>7</sup> Similarly, customization of the reading level of a caption has a major impact on the extent to which different users can gather

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<sup>6</sup> Kennard TDI Speech.

<sup>7</sup> Section 9 would require only a black background for DTVs and thus, a more limited selection that is available in the analog environment. (EIA-708-A §9.18 DTVCC § 8.5.7)

information from television programming.<sup>8</sup> For example, children or individuals for whom English is a second language require a different level of complexity (or even a different language) than do other viewers. Users of closed captioning also require the flexibility to change the size and location of the captioning block on the screen, and have expressed an interest in having captioning available on the small screen on monitors with "picture in a picture" or "PIP" capability. Sporting event spectators might prefer a caption block arranged so that it would not obstruct a critical play, while the audience of a dialogue-intensive drama would want to adjust the caption for greater emphasis on the written text. Also, the ability to move the caption block so that it is not obstructed by a separate caption or an emergency weather announcement rolling across the screen would ensure that viewers did not miss key information.<sup>9</sup> The Saturday Night Live skit in which the news anchor on an MSNBC news show is obscured by captions, diagrams, and logos is no laughing matter to individuals who depend on the accessibility of captions at all times. By requiring adoption of the full EIA-708-A standard, the FCC can ensure that these critical benefits are available to the segment of the population that is deaf, hard of hearing, late deafened, or deaf-blind. Moreover, adoption of

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<sup>8</sup> Again, the proposed standard takes a step backward in that between two to four channels are available today for features such as language choice or reading level, and the standard the FCC proposes would require only one (EIA-708-A §9.2 DTVCC § 6.1). It also would limit deny extended data services such as program indicator or accurate time features available in a digital environment and that further enhance the availability of information. At a minimum, decoders should be capable of decoding and processing all of the Standard Services defined in EIA-708-A, §§ 6.1 and 6.2.1 (six standard services as well as up to fifty seven additional extended services.)

<sup>9</sup> Very often, emergency messages "crawl" across the television screen behind the captions. The viewer has to turn off the captions to be apprised of the emergency, usually by which time the emergency message has already finished. With some models, accessing the captioning function is difficult. The viewer must access the on-screen menu and then select several options before changing the captioning. On other models, the captioning function needs to be reinitiated each time the television set is turned on. Consumers everywhere are requesting that the caption feature be instantly available by a single button on the remote control and that the set would "remember" the caption function settings even if the set is turned off.



the full standard would pave the way for other new technologies in the future that would allow deployment of alternative formats for captioning, *i.e.*, output through a “braille” or directly onto a computer screen, options that are essential to persons with certain combinations of disabilities. Output through a braille or other alternative formats can be made possible through wireless technology from the DTV receiver to the peripheral device. A deaf-blind person, for instance, would follow the dialogue and video descriptions as he/she feels the impulses from the braille.

It simply is not clear why the FCC does not insist that the manufacturers of digital televisions, stand-alone tuners and set-top boxes incorporate *all* of the decoding and display capabilities of the EIA standard, to allow this significant segment of the population to benefit from the increased flexibility promised by the digital revolution. The FCC does not offer a cost-benefit analysis or any other justification for embracing limited capabilities, when the deployment of a full spectrum and a wider array of character fonts, styles and sizes would provide innumerable benefits to the portion of the public that relies on the printed word as its primary means of accessing the information available from television. This omission is particularly perplexing in light of Chairman Kennard’s statement in his TDI convention speech: “think about the cost to our economy if we don’t take steps to make sure that all members of our society can access telecommunications.” The cost to add these features in a digital environment is minuscule. There is no need to re-tool any mold or redesign a physical product. The modification or addition of a few lines of code is all that is required to bring these new technologies to this key segment of the population.

Moreover, in offering no justification for its arbitrary decision to include only Section 9 in its rules, the FCC admits that “[t]he recommendations contained in Section 9, however, do not

exploit the full range of capabilities provided elsewhere in EIA-708-A.” (*NPRM*, para. 8). By implementing only this low standard, the FCC weakens the vision, and ensures that the transition from analog to digital captioning will fall short of the advancements that today’s technology allows.

<sup>10</sup> Not only is such a course of action in clear contravention of the Commission’s stated goal to achieve “substantial improvements over current captioning standards” (*NPRM*, para. 6), it also does not reflect the spirit of Section 255 of the Federal Telecommunications Act and the rules the FCC has promulgated to implement it.

Although TDI recognizes that the FCC and the industry need to determine essential functionality based on consumer needs and technological feasibility, TDI believes that the FCC’s current proposal inappropriately excludes certain minimal requirements necessary to provide this important segment of the population with a critical information service at a level commensurate with that which is available to the general population. As noted above, the incremental cost of implementing full-featured digital captioning is not significant, and even if all the features were included, it is not economically out of reach. Nothing in the FCC’s *NPRM* suggests otherwise. For these reasons, TDI urges the FCC to amend Part 15 to require manufacturers to accommodate *all* of the features and functions of the EIA-708-A standard, and not just those incorporated in Section 9.

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<sup>10</sup> TDI is hopeful that the Commission has learned its lesson from its experience with relay systems and does not again allow the acceptance of minimal standards to stymie technological advancements and not bring about functional equivalency for years to come. Although the FCC enforcement of telecommunication relay service (TRS) was based on Title IV of the Americans with Disabilities Act, the regulations governing minimal requirements were not intended to prohibit technological innovation, it inadvertently brought about a trend that resulted in stagnation of standards for the past several years.

## **II. The FCC Should Require Picture Screens of All Sizes to Support Closed Captioning.**

The FCC also seeks comment on its proposal to continue to rely upon the Federal Trade Commission's ("FTC's") standard in calculating the "size" of a television picture screen in order to determine whether a television is 13 inches or larger, and therefore, subject to the requirement that it include closed captioned circuitry. (*NPRM*, paras. 9 and 10). Because digital screens have different aspect ratios than analog displays (16:9 versus 4:3), the total picture area of a 13 inch digital screen is smaller than that of a 13 inch analog screen. As TDI encourages a reexamination of the FTC standard to avoid confusion and maintain consistency within the industry, it urges the Commission to take this opportunity to support even greater access to new technologies. That is, the improved resolution that DTV provides, combined with the font customization that EIA-780-A allows, renders obsolete the historical 13 inch threshold under which closed captioning is not mandated. Simply put, the new technology makes captions more legible, thereby making the 13 inch limit arbitrary. Therefore, reducing this threshold would bring captioning to people outside their homes, as more airplanes, hospitals, and other public places frequently deploy smaller personal television screens.

## **III. There Should Be No Technology Gap During the Analog to Digital Transition.**

The FCC proposes to require that dual mode receivers operating in the analog mode provide closed captioning functionality pursuant to the existing rules, and when operating in the digital mode, function in accordance with EIA-708-A. (*NPRM*, para. 11) The FCC further proposes to require that decoder circuitry in digital tuners "respond primarily to any digitally formatted caption information" so that consumers who purchase DTV receivers will be able to take advantage of the

new capabilities of captioning in the digital environment. Because TDI believes the Commission should take steps to ensure that consumers have access to new capabilities that digital technology promotes, TDI endorses both these proposals. Along the same line, TDI encourages the Commission to ensure that analog features -- such as those available on Line 21 -- are not prematurely eliminated, but continue to be available throughout the transition from analog to digital technology. Many of today's new primary use sets will still be running in bedrooms and family rooms for decades to come, and the FCC should ensure that they are not unnecessarily made obsolete.

**V. The Commission Should Require Components to Comply with the TDCA.**

The Commission also proposes to require that separate DTV tuners (marketed as components, separate from digital display devices) and set-top converters comply with the requirements of the TDCA and provide for closed captioning. (*NPRM*, para. 12) Regardless of whether the FCC were to encourage the provision of closed captioning in sets smaller than 13 inches, it is likely that most, if not all, of the early generations of DTV "sets," whether integrated DTV receivers or separate tuner and display components, will utilize displays that are 13 inches or larger. TDI, therefore, strongly agrees with the Commission's tentative conclusion that the provisions of Section 330(b) are sufficiently broad to permit the FCC to require that set-top converters and receivers incorporate closed caption decoding capability. It is critical that consumers who are deaf, hard of hearing, late deafened or deaf-blind are not forced to make a major expenditure to receive digital television programming. How the FCC fashions the transition is

critical because all transmission will be fully digital by 2006, and electronics purchased today will still have many years of useful life remaining.

The FCC also requests comments on the estimated cost to consumers to require dual mode receivers to be capable of displaying both analog and digital captions, as well as the cost of including captioning functionality in set-top converter boxes and separate DTV tuners. (*NPRM*, para. 13) During the transition period, the market for dual mode receivers and set-top convertors will be significant, as many television viewers may want to rely on intermediary electronics as the cost of DTV declines and the incidence of DTV programming increases. Given the likely demand for these components, the incremental cost of adding dual-mode closed captioning capability should be negligible, and certainly outweighed by the benefits..

**V. The Commission Should Expedite Adoption of Its Rules.**

The Commission proposes that the closed captioning requirements for DTV become effective one year after adoption despite the fact that CEMA, a trade association for electronics manufacturers, advocates an effective date that would reflect an 18-24 month design cycle. (*NPRM*, para. 14) TDI agrees that the FCC should implement its rules one year after their adoption, if not sooner. The rules will establish deadlines related to manufacturing, not the retail sale of the affected receivers, set-top converters, and tuners. One year provides ample time for the manufacturers to design and incorporate the capabilities of the EIA standard in their products. Moreover, even if manufacturers are not tracking the development of the instant proceeding through CEMA, they are likely aware of their own social obligation and the marketing benefits associated with implementing closed captioning capability with or without a mandate from the

FCC. Not only is it important to hasten implementation of the rules, but it is critical that the FCC expedite their adoption. Moreover, TDI finds comfort in the Commission's concern over any potential adverse effect that the rules could have on any Year-2000 remedial efforts. (*NPRM*, para. 15) Only a schedule that allowed for adoption, publication (in the Federal Register), and implementation of the rules on a very fast track would have any possibility at all of affecting "Y2K" readiness.

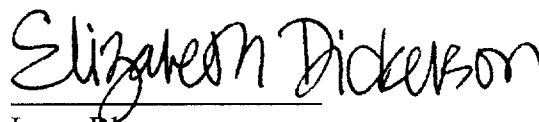
TDI also supports the Commission's conclusion that a one-year deadline would provide enough time for programmers to incorporate closed captioning consistent with these new standards into the programming they distribute. Even if there were a short lag between the production of DTVs and the availability of programming, it is critical that the manufacturing cycle not be delayed. As technology improves, the useful lives of television sets and other electronics have been extended. It is important to make these new features available to the public as soon as possible because many sets purchased now will be in use well into the twenty-first century. The longer the delay in implementation, the more digital TVs there will be on the market which are unable to display the full range of digital caption content.

## **VI. Conclusion**

It is not very often that a new technology -- such as digital transmission -- unleashes virtually unlimited opportunities to enhance the accessibility features of key electronic devices, and thus the quality of the lives of the people TDI represents. In response to Chairman Kennard's challenge, TDI continues to explore ways in which this new technology can define the vision and bring concrete benefits -- in the form of more choices and better access -- to all Americans.

Because television viewing is such a critical component of mainstream activities, it is crucial that the FCC take all necessary steps to enhance the information gathering capabilities that this medium provides. For the foregoing reasons, TDI strongly recommends that the Commission adopt the entire EIA-708-A standard and otherwise maximize the potential of digital technology to its fullest capability.

Respectfully submitted,



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